Wildlife Biological Evaluation

5 Points Fuels Reduction Project

La Grande Ranger District, Wallowa-Whitman National Forest

January 2021

Authors:

_/s/ Rachel Granberg_____ Date January 2021
Rachel Granberg
Acting Zone Wildlife Biologist
Wallowa-Whitman National Forest

WILDLIFE BIOLOGICAL EVALUATION

Introduction

An endangered species is an animal or plant species listed under the Endangered Species Act that is in danger of extinction throughout all or a significant portion of its range. A threatened species is an animal or plant species listed under the Endangered Species Act that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. A sensitive species is an animal or plant species identified by the Forest Service Regional Forester for which species viability is a concern either a) because of significant current or predicted downward trend in population numbers or density, or b) because of significant current or predicted downward trends in habitat capacity that would reduce a species' existing distribution. The R6 Sensitive Species list pertinent to this project is dated March 2019. Threatened, endangered, and sensitive species effects are summarized in this report by TES status and species.

As part of the National Environmental Policy Act (NEPA) decision-making process, biological evaluations (BE) are required to determine how proposed FS management activities may affect Proposed, Endangered, Threatened, or Sensitive (PETS) species or their habitats (U.S. Forest Service Manual [FSM] 2670). This evaluation presents existing information on PETS species and their habitat in the project area, and describes the anticipated direct, indirect, and cumulative effects resulting from the proposed project. The review is conducted to ensure that FS actions do not contribute to the loss of species viability or cause a species to move toward federal listing (43 U.S.C. 1707 et seq). Threatened and Endangered species are managed under authority of the Federal Endangered Species Act (ESA) (36 U.S.C. 1531-1544) and the National Forest Management Act (NFMA) (16 U.S.C. 1600-1614). The ESA requires Federal agencies make certain all actions they authorize, fund, or carry out will not likely jeopardize the continued existence of any threatened or endangered species. Sensitive species are those recognized by the Region 6 Regional Forester as needing special management to meet NFMA obligations. FS policy requires a BE to determine possible effects to sensitive species from proposed management activities.

PRE FIELD REVIEW

The following proposed, endangered, threatened, or sensitive species (PETS) of wildlife are listed on the Regional Forester's Sensitive Species List (March 2019; Table 1). Only those PETS, or their habitats, known or suspected to occur in or immediately adjacent to the analysis area are addressed in this BE.

Table 1. PETS Species Review, Wallowa-Whitman and 5 Points Project Area

Common Name	Status	Wallowa-Whitman[1] / Project Area Presence[2]	Determination[3]
AMPHIBIANS			
ROCKY MOUNTAIN TAILED FROG	SENSITIVE	D/N	Not present
Tailed frogs are strongly adapted to cold water conditions. They occur in very cold, fast-flowing streams that contain large cobble or boulder substrates, little silt, often darkly shaded, and less than 20ºC (Bull and Carter 1996). Tailed frogs have never been documented in the 5 Points watershed.			
COLUMBIA SPOTTED FROG	SENSITIVE	D/K	NI
This species is found at aquatic sites in a variety of vegetation types, from grasslands to forests (Csuti et al. 2001). Spotted frogs occur frequently within the area and one individual was observed during summer 2020 surveys near a spring within the project area.			
BIRDS			
UPLAND SANDPIPER	SENSITIVE	S/N	Not present
AMERICAN PEREGRINE FALCON	SENSITIVE	D/N	Not present
GREATER SAGE-GROUSE	SENSITIVE	S/N	Not present
BUFFLEHEAD	SENSITIVE	S/N	Not present
BLACK SWIFT	SENSITIVE	S/N	Not present
BLACK ROSY FINCH	SENSITIVE	S/N	Not present
WALLOWA ROSY FINCH	SENSITIVE	S/N	Not present
HARLEQUIN DUCK	SENSITIVE	S/N	Not present
BALD EAGLE	SENSITIVE	D/K	MIIH
Nesting habitat consists of large conifers within 1 km of water containing adequate supply of medium to large fish (Johnsgard 1990). No known nest sites exist within the project area, foraging is suboptimal in the analysis area due to lack of large water bodies			
LEWIS'S WOODPECKER	SENSITIVE	D/H	BI
Primary breeding habitats include open ponderosa pine, riparian cottonwood, and logged or burned pine (Tobalske 1997). No sightings are reported for the project area, but potential habitat is present.			
WHITE-HEADED WOODPECKER	SENSITIVE	D/K	BI
Nesting habitat consists of open canopy stands with mature ponderosa pine (Buchanon et al. 2003). There are no recent observations of this species within the analysis area, but habitat is present.			
COLUMBIAN SHARP-TAILED GROUSE	SENSITIVE	D/N	Not present
Potential habitats consist of bunchgrass prairies interspersed with stream bottoms containing deciduous shrubs and trees. The species was extirpated from Oregon, but has been reintroduced into northern Wallowa County. No sightings or potential suitable habitat occur within or adjacent to the project area.			
MAMMALS			
CANADA LYNX	THREATENED	D/N	Not present
GRAY WOLF	SENSITIVE	D/H	NI
Gray wolves are habitat generalists inhabiting a variety of plant communities, typically containing a mix of forested and open areas with a variety of topographic features. Potential habitat exists, but no known packs are currently using the area for breeding.			
FISHER	SENSITIVE	S/N	Not present

Preferred habitat consists of late-successional conifer forests. No sightings have been reported for northeastern Oregon since 1976, leaving no evidence for an extant population on the Wallowa-Whitman (Aubrey and Lewis 2003).			
CALIFORNIA WOLVERINE	CANDIDATE	D/N	Not present
Preferred habitat consists of alpine and subalpine areas with little or no human presence. Project area does not contain suitable habitat.			
BIGHORN SHEEP	SENSITIVE	D/N	Not present
TOWNSENDS BIG-EARED BAT	SENSITIVE	D/H	MIIH
This bat roosts in buildings, caves, mines, and bridges and the presence of suitable roost sites is more important than the vegetation type in determining the distribution of this bat. There are no known roost sites for Townsends within the 5 Points project area. However, Northwestern Bat Hub has recorded observations of this species on the Wallowa-Whitman.			
SPOTTED BAT	SENSITIVE	S/N	Not present
Spotted bats primarily rely on crevices and caves in tall cliffs for roosting which likely determine their distribution. The 5 Points project area lacks tall cliffs, making occupancy unlikely.			
FRINGED MYOTIS	SENSITIVE	D/H	MIIH
This bat is found throughout much of western North America and has been documented on the Wallowa-Whitman. Roosting in decadent trees and snags is common throughout its range. Although no observations have been recorded in the project site, the presence of large trees within the project area makes occurrence likely.			
MOLLUSKS			
POPLAR OREGONIAN	SENSITIVE	S/N	Not present
Land snail found in rather open and dry large-scale basalt taluses, generally at lower elevations. Most colonies occur at slope bases along the major river corridors, not in major tributaries. Associated vegetation includes *Celtus, Artemisia, Prunus, Balsamorrhiza, Seligeria*, and sage scrub. Generally in steep north or east-facing taluses, often only at the base. Lack of large scale basalt talus makes the occurrence of this species unlikely.			
UMATILLA MEGOMPHIX	SENSITIVE	D/N	Not present
Land snail found within talus, closely associated with intact conifer forests, riparian areas or both. Surveyors on the Umatilla National Forest in 2012 and on the Wallowa-Whitman in 2016 found this species at 3 separate sites. Lack of talus within the project area makes it unlikely for this species to be present.			
BLUE MOUNTAINSNAIL	SENSITIVE	S/N	Not present
A snail of riparian habitat and open forest, typically found in rock talus, shrubby areas, under forest litter, fairly open ponderosa pine and Douglas-fir forest with some deciduous understory and common grasses (Burke 2013). Refugia sites for aestivation are assumed to be located under more stable rock schist and woody debris. Surveys conducted on the Wallowa-Whitman did not locate this species. It is unlikely this species occurs within the project area, due to its rarity and lack of talus within the project area			
FIR PINWHEEL	SENSITIVE	D/K	MIIH
Most often found in moist and rocky Douglas-fir forest at mid-elevations in valleys and ravines (Frest and Johannes 1995). Recent surveys performed in the La Grande Ranger District found the species just north of the analysis area and occurrence is likely within the project area.			
COLUMBIA GORGE OREGONIAN	SENSITIVE	S/N	Not present
Land snail found in rather open and dry large-scale basalt taluses, generally at lower elevations. Most colonies occur at slope bases along the major river corridors, not in major tributaries. Associated vegetation includes *Celtus, Artemisia, Prunus, Balsamorrhiza,* and *Seligeria*. Surrounding vegetation is sage scrub. Generally in steep north or east-facing taluses, often only at the base. Lack of basalt talus makes the occurrence of this species unlikely.			
THINLIP TIGHTCOIL	SENSITIVE	S/D	MIIH
Somewhat mesophilic, occurring in ponderosa pine and Douglas-fir forests lower elevations. Occurs in a variety of habitats, but seems to prefer steep drainages with a persistent water source. Other Pristiloma species in the ecoregion are known to prefer moist microsites such as basalt talus accumulations, usually with riparian influence. Potential habitat is present with recent surveys documenting this species near the analysis area.			
SHINY TIGHTCOIL	SENSITIVE	D/K	MIIH

Found in ponderosa pine and Douglas-fir forests at moderate to high elevations. Quaking aspen also provides habitat. Other *Pristiloma* species in the ecoregion are known to prefer moist microsites such as basalt talus accumulations, usually with riparian influence. Recent surveys have documented this species in two sites within the analysis area.			
INSECTS			
GILETTE'S CHECKERSPOT	SENSITIVE	S/N	Not present
MEADOW FRITILLARY	SENSITIVE	S/N	Not present
The only known site in Oregon is located in Umatilla County (Fleckenstein 2006), well outside of the project area.			
SILVER-BORDERED FRITILLARY	SENSITIVE	S/N	Not present
Suitable habitat consists of bog and marshes, often willowy sites, sometimes tall wet grass (Pyle 2002) with larvae dependent on violet species. Only three sites are reported for Oregon, one of which is located north of the town of Halfway on private land. No larval host species are reported for the project area, and suitable habitat for this species is unlikely.			
INTERMOUNTAIN SULPHUR	SENSITIVE	D/N	Not present
Suitable habitat consists of sagebrush with scattered Ponderosa Pine. No sightings have been documented and suitable habitat is not available in the project area.			
YUMA SKIPPER	SENSITIVE	D/N	Not present
This species has been documented along the Imnaha River. It is closely associated with its host plant *Phragmites australis*. Lack of the presence of the host species within the project area makes occurrence highly unlikely.			
SUCKLEY CUCKOO BUMBLEBEE	SENSITIVE	D/H	NI
This species of cuckoo bumblebee is a known parasite of colonies of *Bombus occidentalis* and inhabits much of the same range as the western bumblebee. Surveyors have documented this species in the analysis area.			
MORRISONI BUMBLEBEE	SENSITIVE	D/N	Not present
This species is known throughout the US Mountain West (Williams et al. 2014). Surveys across the Wallowa-Whitman from 2014-2018 have not detected this species. The lack of open, dry scrub in the project area makes this species unlikely to occur.			
WESTERN BUMBLEBEE	SENSITIVE	D/H	NI
The western bumblebee is a habitat generalist and inhabits a wide variety of habitat types, associated with flowering plants. Recent surveys across the Wallowa-Whitman has found them to be distributed across multiple elevations and habitat types. Surveyors observed this species within the analysis area in summer 2020.			

[1] D = Documented occurrence, S = Suspected occurrence
[2] K = Known to occur, S = Suspected to occur, H = Not known to occur, but habitat present, N = No habitat present and/or not present.
[3] NI = No Impact, MIIH = May Impact Individuals or Habitat, BI = Beneficial Impact

Methodology

For the 5 Points Project, the proposed project area, Upper 5 Points subwatershed, and Lower 5 Points subwatershed were considered for this evaluation. Past activities and cumulative effects within the project area have been incorporated into the existing condition descriptions below. Actions which overlap with the 5 Points project and would have a measurable cumulative effect on each of these species are described in the cumulative effects discussions below.

COLUMBIA SPOTTED FROG (*RANA LUTEIVENTRIS)*

Background

The Columbia spotted frog is found at aquatic sites in a variety of vegetation types, from grasslands to forests (Csuti et al. 2001). It is highly aquatic and is usually near cool, permanent, quiet water. Found in marshes, wet meadows, permanent ponds, lake edges, and slow streams with non-woody wetland vegetation, the Columbia spotted frog may move considerable distances after breeding. Breeding occurs in shallow water at pond edges, stream margins, and in inundated floodplains. Egg masses are free floating and tadpoles live in the warmest parts of the water. Springs maybe used as over-wintering sites for local populations of spotted frogs.

Threats include pond bank destabilization by ungulates, activities that impact the hydrologic function of the floodplain, and conifer encroachment in meadows around breeding ponds.

Existing conditions

A study conducted from 1997-2004 in northeastern Oregon found that this frog is widely distributed throughout northeastern Oregon where permanent ponds and creeks occur, and that although populations are generally not large, numerous small ones occur, particularly when connected by flowing water (Bull 2005). Surveys were conducted within the 5 Points project area in 2020 with one individual observed at the south end of the project area near a recently fenced-off spring.

EFFECTS ANALYSIS

Alternative 1- Under this alternative, the risk of wildfire or disease/insect outbreaks would continue to increase naturally over time because there would be no changes to stand stocking levels (currently overstocked) or fuel loads from active management. Assuming no wildfire or disease/insect outbreaks conifer encroachment on meadows and over streams could lower water temperature on breeding ponds, reducing habitat for spotted frogs. Wildfire could affect spotted frogs and their habitat by burning through riparian areas and removing existing trees, aspen, and other riparian vegetation that is currently shading streams, preventing erosion and sedimentation, and keeping banks stable. Depending on the extent and severity of the disturbance, this could result in direct mortality to frogs and/or a short-term reduction in suitable habitat. However, it could also increase the amount of suitable habitat in the short- to mid-term by reducing stream shading and increasing water temperatures.

Alternative 2 – There would be no direct effects to spotted frogs from treatment activities because no treatments would take place within the stream or breeding pond sites. Commercial and fuels treatments in the uplands would create forest conditions more resilient to future disturbances and allow for fire to return to the system and maintain healthy ecosystem function.

Cumulative Effects

Ongoing and foreseeable activities considered in this cumulative effects analysis include firewood cutting, travel of open roads, summer and winter recreation, livestock grazing, and prescribed fire

activities outside the project area, among others. No measurable cumulative impacts to spotted frogs are expected due to lack of negative impacts to habitat under the proposed alternatives.

Determination

Proposed project activities under the action alternative are expected to have **No Impact (NI).**

BALD EAGLE (*HALIAEETUS LEUCOCEPHALUS*)

Background

The Bald Eagle ranges throughout much of North America. In Oregon, species numbers vary by season and include breeding, migration, and wintering populations. The breeding season begins in late February or March, with juveniles fledging between mid-July and early September.

Nesting territories are normally associated with large bodies of water – fish is an important staple of their diet. In the Pacific Northwest recovery area, the preferred nesting habitat for Bald Eagles is predominately uneven-aged, mature coniferous (ponderosa pine, Douglas-fir) stands or large black cottonwood trees along a riparian corridor. Eagles usually nest in mature conifers with gnarled limbs that provide ideal platforms for nests.

Existing Conditions

We did not observe Bald Eagles during surveys in 2020, but there is potential for Bald Eagles to occupy habitat within the analysis area. The project area contains several fish-bearing streams, including 5 Points Creek, which could be used by Bald Eagles for occasional foraging, though more optimal foraging occurs on the Grande Ronde River nearby.

EFFECTS ANALYSIS

Direct and Indirect Effects

Alternative 1 – The no action alternative would result in no measurable impacts to this species.

Alternative 2 – Risk of disturbance to foraging Bald Eagles is low for all activities due to a lack of past nesting occurrence in the project area. No timber harvest or active lighting of prescribed fire will occur within 300 feet of perennial fish bearing streams under any alternative and log hauling and smoke from fuels treatments will occur under the action alternative. Potential foraging in the project area could occur at 5 Points, although the likelihood of occurrence is low based on the lack of reported sightings and large bodies of water.

Silvicultural treatments within one mile of 5 Points may benefit future Bald Eagle nesting habitat by accelerating tree growth and reducing risk of stand disturbance due to insect-outbreak and wildfire. Smoke generated by fuels treatments may be of sufficient density to temporarily displace foraging eagles, but the impact would be of short duration. Increased human activity along portions of 5 Points due to log hauling and transportation-related activities may displace foraging eagles if present in close proximity to activities. However, the impact would be localized and temporary. In addition, risk of disturbance to foraging Bald Eagles is low for all activities due to a lack of past occurrence in the project area. If Bald Eagle use of the project area changes, this new information would be assessed and mitigations developed to protect newly discovered nests or roost sites.

Cumulative Effects

No measurable cumulative impacts, for ongoing or reasonably foreseeable activities in the area, to Bald Eagles are expected.

Determination

Both alternatives would have no measurable effect on Bald Eagle nesting or winter foraging/roosting. Although the project work may temporarily displace Bald Eagles, the streams within the project area are not large enough to provide optimal foraging habitat. Alternative 2 **May Impact Individuals or Habitat (MIIH)** in the project area temporarily, but is not expected to have any impact on population viability.

LEWIS'S WOODPECKER (*MELANERPES LEWIS*)

Background

Lewis's Woodpecker is associated with open woodland habitat, often at lower elevations, near water (Marshall et al. 2003). In Oregon, it breeds primarily in white oak, ponderosa pine, and riparian cottonwood communities of the river valleys of eastern Oregon, and winters in oak savannah (Csuti et al. 2001, Marshall et al. 2003). Important components of breeding habitat

include an open woodland canopy and large diameter dead or dying trees. Large, stand replacement fires in ponderosa pine along streams and rivers provide important nesting habitat for this species. Nest sites are usually near streams, wet meadows or dense shrub cover where insects are abundant. It winters in oak savannah. Unlike most woodpeckers, Lewis's does not peck at wood for food, but catches insects by flycatching and gleaning during spring and summer. It feeds on ripe fruits and acorns during fall and winter.

Existing conditions

No surveys have been specifically conducted for Lewis's Woodpecker, but the project area has been surveyed for a wide variety of wildlife species. No sightings have been recorded within the project area boundary during the summer 2020 field season. While its presence in the project area is unknown, ponderosa pine forest indicates potential habitat may exist. The project area is lacking Old Forest Single Story (OFSS) habitat which is characteristic of old ponderosa pine forests. Large ponderosa pine, western larch and Douglas-fir snags are uncommon in the project area because of past timber management, road building and firewood cutting. A snag analysis show snags >21" dbh are sufficient in ponderosa pine/Douglas-fir wildlife habitat types throughout the project area (see Wildife Specialist Report). There are remnant cottonwoods within riparian habitat, though many are suppressed by dense grand fir.

EFFECTS ANALYSIS

Direct and Indirect Effects

Alternative 1- There will be no direct or indirect effects to Lewis's Woodpeckers under the no action alternative.

Alternative 2 – Alternative 2 proposes commercial and non-commercial treatment within 117 acres of existing Old Forest Multi-story (OFMS) structure stages (Table 2) to move those stands to a single story structure stage (OFSS), which is vastly under-represented when compared to the historical range of variability (HRV). There are also 609 acres of proposed treatments within the understory reinitiation (UR) structure stage to encourage large tree growth within an open canopy setting and facilitate development of OFSS. No trees over 21" dbh would be removed in these treatments.

In the short term, disturbance from treatment activities might cause individual birds to shift spatially, but these alternatives would increase the potential of the project area to provide habitat in the long-term. The proposed treatments (removing small trees, retaining big trees, and prescribed fire) would accelerate development of single-story, mature ponderosa pine and Douglas-fir.

Table 2. Acres of treatments within the dry and moist upland forest potential vegetation groups which will convert OFMS and UR to OFSS, benefitting woodpecker species that depend on open stands of large trees.

Conversion to Old Forest Single-story within the 5 Points Project Area

	Alternative 2	
Habitat Type	**Commercial Harvest**	**Non-commercial Harvest**
Old Forest Multi-story	81 acres	36 acres
Understory Reinitiation	77 acres	532 acres

Cumulative effects

Past activities that have affected Lewis's Woodpecker habitat including grazing, fire suppression, prescribed fire, logging, and woodcutting have been incorporated into the existing conditions. Lewis's Woodpeckers have relatively small home ranges (15 acres, Thomas 1979) and the cumulative effects are analyzed at the project level. The Five Points project is not expected to contribute to cumulative effects for the Lewis's Woodpecker.

Determination

Effects from Alternative 2 will have a **Beneficial Impact (BI)** on the species through habitat improvement associated with less-dense stands.

WHITE-HEADED WOODPECKER (*PICOIDES ALBOLARVATUS*)

Background

This woodpecker is closely associated with open ponderosa pine or mixed conifer dominated by ponderosa pine (Csuti et al. 2001). Although most abundant in single-story ponderosa pine old-growth forest stands, White-headed Woodpeckers will use areas where silviculture treatments provide sufficient densities of large-diameter ponderosa pines. It requires large trees for foraging and snags for nesting (Csuti et al. 2001). Nest sites are usually excavated in snags but can also occur in stumps, leaning logs, and dead tops of live trees. It is the only woodpecker that relies heavily on ponderosa pine seeds for food. It forages on the trunks, branches, and foliage of large-diameter ponderosa pine for pine seeds and insects. It rarely drums or taps and feeds by peeling bark off of trees to reach insects underneath.

Existing conditions

The White-headed Woodpecker is an uncommon permanent resident in forests of the Ochoco, Blue, and Wallowa mountains. Past, present, and ongoing habitat loss pose a threat to the continued existence of the species throughout its range (Wisdom et al. 2000). OFSS stands, which this species depends on, have declined in area by over 60% in the Blue Mountains (Hessburg et al. 1999). Wisdom et al. (2000) concluded that source habitat for most species declined strongly from historical to current periods across large geographic areas, that the steepest

declines were for species dependent on low elevation, old forest habitats, and that the White-headed Woodpecker has experienced the sharpest reduction of any species associated with late and old forest (LOS) habitat. Much of the remaining LOS structure exists in isolated remnant stands. The loss has occurred mainly through a combination of timber harvest, livestock grazing, and fire exclusion (Hessburg et al. 1999).

White-headed Woodpecker surveys were conducted within suitable habitat along ridges within the project boundary, paired with control transects outside the project boundary. Surveyors observed Hairy Woodpeckers and Pileated Woodpeckers, but no White-headed Woodpeckers, though potential habitat exists.

EFFECTS ANALYSIS

Direct and Indirect Effects

Alternative 1- Under to no-action alternative, stands would continue to trend toward OFMS rather than the historically common OFSS structure that the White-headed Woodpecker depends on. Additionally, fire risk would continue to increase, posing a higher probability of stand-replacing fire and loss of habitat for the White-headed Woodpecker.

Alternative 2 – Alternative 2 proposes commercial and non-commercial treatment within 117 acres of existing Old Forest Multi-story (OFMS) structure stages (Table 2) to move those stands to a single story structure stage (OFSS), which is vastly under-represented when compared to the historical range of variability (HRV). There are also 609 acres of proposed treatments within the understory reinitiation (UR) structure stage to encourage large tree growth within an open canopy setting and facilitate development of OFSS. No trees over 21” dbh would be removed in these treatments.

In the short term, disturbance from treatment activities might cause individual birds to shift spatially, but these alternatives would increase the potential of the project area to provide habitat. The proposed treatments (removing small trees, retaining big trees, and prescribed fire) would encourage development open stands of single-story, mature ponderosa pine and Douglas-fir that would benefit White-headed Woodpecker in the long-term.

Cumulative effects

Past activities that have affected White-headed Woodpecker habitat including livestock grazing, fire suppression, prescribed fire, logging, and woodcutting have been incorporated into the existing conditions. The 5 Points project is not expected to contribute to cumulative effects to White-headed Woodpeckers.

Determination

Alternative 2 is expected to have a **Beneficial Impact (BI)** on the White-headed Woodpecker through habitat improvement by increasing OFSS habitat.

GRAY WOLF (*CANIS LUPUS*)

Background

Gray wolves are habitat generalists inhabiting a variety of plant communities, typically containing a mix of forested and open areas with a variety of topographic features. Historically, they occupied a broad spectrum of habitats including grasslands, sagebrush steppe, and coniferous, mixed, and alpine forests. They have extensive home ranges and prefer areas with few roads, generally avoiding areas with an open road density >1.0 mi/mi^2 (Witmer et al. 1998). Dens are usually located on moderately steep slopes with southerly aspects within close proximity to surface water. Rendezvous sites, used for resting and gathering, are complexes of meadows adjacent to timber and near water (Kaminski and Hansen 1984). Both dens and rendezvous sites are often characterized by having nearby forested cover remote from human disturbance. Wolves are strongly territorial, defending an area of 75-150 mi^2, and home range size and location is determined primarily by abundance of prey. Wolves feed largely on ungulates and beavers, but will consume small mammals and fish to a lesser extent (Verts and Carraway 1998). Wolves are generally limited by prey availability and threatened by human disturbance. Most land management activities are compatible with wolf protection and recovery, especially actions that manage for viable ungulate populations.

Existing Conditions

Gray wolves are listed as sensitive on the Regional Forester's Sensitive Species List. Protection of denning and rendezvous sites and managing for prey species are the two main concerns for managing wolf habitat on the Wallowa-Whitman. There are no dens or rendezvous sites within the project area currently (ODFW, pers. comm.). Potential habitat and adequate prey occur throughout the project area, and wolf movement through the project area is likely.

EFFECTS ANALYSIS

Direct and Indirect Effects

Alternative 1 - There would be no direct or indirect impacts to wolves under the no-action alternative because no project activities would occur.

Alternative 2 - The action alternative would not affect wolves or their habitat because there is an abundance of prey and most USFS management activities minimize disturbance at dens and rendezvous sites. No known den or rendezvous sites are located within the project area. Treatments are not expected to reduce big game prey availability. Human disturbance associated

with active logging and burning could temporarily displace wolves from the project area in the short term but no long-term effects are expected.

Cumulative Effects

Because the home range of a colonizing wolf population can average 301[2] miles (Bangs and Fritts 1993) with dispersal movements up to 522 miles (Boyd and Pletscher 1999), the Upper and Lower 5 Points Creek subwatersheds define the cumulative effects analysis area. Proposed treatments will not impact wolves or wolf habitat when combined with cumulative effects.

Determination

There would be **No Impact (NI)** to the gray wolf from any of the alternatives from this project.

TOWNSEND'S BIG-EARED BAT (*CORYNORHINUS TOWNSENDII*)

Background

Townsend's big-eared bat ranges through much of western North America. USFS and BLM have listed the species as Sensitive in Oregon (Interagency Special Status/Sensitive Species Program 2015) and Oregon Department of Fish and Wildlife has listed the species as Sensitive, Critical Category, and a Conservation Strategy Species (Oregon Biodiversity Information center 2016).

Occurring at all but the highest elevations in the Blue Mountains, Townsend's big-ear bat is present in the vicinity of water bodies and selects for more open habitats for foraging. Their diet is composed of predominately moths, and foraging occurs along the forest edge near riparian zones. Caves, mines, bridges, and buildings are all used as roost sites.

Threats to this species include human disturbance at roosts (including those researching this species), filling of mines, destruction of abandoned buildings, and pesticide application. Wind turbines are known to have a negative impact on bats, but this is suspected to be minimal for Townsend's big-eared bat compared to tree-roosting species (Arnett et al. 2008).

Existing conditions

There are no known records of Townsend's big-eared bat in the project area, but this species is documented in the Baker Valley. There are no known roost sites, hibernacula, or maternity colonies in the project area, but suitable habitat is present.

EFFECTS ANALYSIS

Alternative 1- Under the no action alternative, there is no impact to this species.

Alternative 2- If Townsend's big-eared bats occur in the project area, mechanical treatments and/or smoke from prescribed fire could result in the decreased fitness of individual bats foraging in the area. However, this species does select for more open habitat for foraging and would benefit from proposed treatments. Roosting habitat would not be affected because this is not a primarily tree-roosting species.

Cumulative effects

Ongoing and reasonably foreseeable activities within or near the project area include firewood cutting, grazing, prescribed fire, noxious weed treatment, road maintenance, and recreation (snowmobile, OHV use, mountain biking, dispersed camping, hunting). This species depends on caves and mines for roosting so activities that affect snags do not affect roost availability. There are no reasonably foreseeable cumulative effects for this species.

Determination

The action alternative **May Impact Individuals or Habitat (MIIH)** during use of heavy equipment and the day of prescribed fire activity, but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species.

FRINGED MYOTIS (*MYOTIS THYSANODES*)

Background

The fringed myotis ranges through much of western North America. It occurs from sea-level to 9,500 ft, but is primarily found at middle elevations (4,000-7,000 ft). Distribution is patchy. It appears to be most common in drier woodlands (oak, ponderosa pine) but is found in a wide variety of habitats including desert scrub, mesic coniferous forest, grassland, and sage-grass steppe (O'Farrell and Studier 1980). They are known to roost in crevices in buildings, underground mines, rocks, cliff faces, and bridges but roosting in decadent trees and snags, particularly large ones, is common throughout its range (O'Farrell and Studier 1980). The fringed myotis has been documented in a large variety of tree species and it is likely that structural characteristics (e.g. height, decay stage) rather than tree species play a greater role in selection of a snag or tree as a roost (Weller and Zabel 2001).

This myotis feeds on a variety of invertebrate taxa. The two most commonly reported orders in its diet are beetles and moths, however several potentially flightless taxa such as harvestmen, spiders, and crickets have been found in its diet. Fringed myotis fly slowly, able to navigate more

dense canopies, both catching prey in flight and gleaning prey from vegetation (O'Farrell and Studier 1980).

Existing conditions

This species has been documented on the Wallowa-Whitman and there is suitable habitat within the project area. However, there are no known roost sites, hibernacula, or maternity colonies in the project area. While its occurrence in the project area is unknown, the presence of ponderosa pine forest and permanent water indicate potential habitat may exist.

EFFECTS ANALYSIS

Alternative 1- Under the no action alternative, there is no impact to this species.

Alternative 2- If fringed myotis occur in the project area, mechanical treatments and prescribed fire smoke could result in the deaths of individual bats or cause them to shift spatially. Although the impact would be minimal, thinning stands typically benefits bats by increasing flight space in the stand. Roosting habitat would not be significantly affected because no snags >9" dbh or trees > 21" dbh (these trees represent future large snags) would be cut unless identified as hazard trees. Prescribed fire has the potential to both consume trees and snags that provide roosting habitat as well as create roosting habitat. The long-term benefits of thinning and prescribed fire would have a greater beneficial effect than the potential short-term negative impacts.

Cumulative effects

Ongoing and reasonably foreseeable activities within or near the project area include firewood cutting, grazing, prescribed fire, noxious weed treatment, road maintenance, and recreation (snowmobile, OHV use, mountain biking, dispersed camping, hunting). Of these activities, the ones that have the potential to impact roost trees are firewood cutting and prescribed fire. Firewood cutting occurs primarily along roads and does not target snags or trees over 21" dbh so it should not have a measurable effect on roost site availability. Prescribed fire outside the project area could eliminate suitable roost sites in addition to the roost sites that would be eliminated from burning and harvest within the project area. However, prescribed fire is staggered across multiple years and the area will continue to provide a mosaic of burned and unburned habitat and thus provide an abundance of roost sites for this species.

Determination

The action alternatives **May Impact Individuals or Habitat (MIIH)** during use of heavy equipment and the day of prescribed fire activity, but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species.

FIR PINWHEEL (*RADIODISCUS ABIETUM*), THINLIP TIGHTCOIL (*PRISTILOMA IDAHOENSE*), AND SHINY TIGHTCOIL (*PRISTILOMA WASCOENSE*)

Background

Radiodiscus abietum is ranked as S1 (Critically Imperiled) in Oregon (Oregon Biodiversity Information Center 2019; hereafter ORBIC). It is a terrestrial pulmonate snail originally collected from near the mouth of the East Fork Weiser River in Idaho by Baker in 1930. Generally found in rather moist, rocky forested terrain, at medium-high elevations. Most often, the dominant vegetation is *Pseudotsuga menziesii* forest, with a rich understory including many forbs, deciduous shrubs and bryophytes. Commonly associated species include *Alogona ptychophora ptychophora, Cryptomastix mullani subspp*. and other *Cryptomastix* spp., *Microphysula ingersolli* and *Anguispira kochi*. Frest and Johannes (1995) describe it as a mesophile species, apparently feeding on partly decayed leaves and organic debris in soil. They also note that it is most commonly found in remnant moist forest patches at moderate elevations but is never abundant.

Pristiloma wascoense is ranked as S2 (Imperiled) in Oregon and (ORBIC 2019). The species has been reported from ponderosa pine and Douglas-fir forested habitat at high elevations, as well as from moist, shaded talus habitat with deciduous trees; moist microsites associated with talus or riparian habitat may be typical for members of the genus (Jordan and Black 2012). Burke (2013) notes the species may often be found in the vicinity of deciduous trees such as aspen and cottonwood. Associated mollusks include Anguispira kochi, Cryptomastix mullani, Euconulus fulvus, Punctum randolphi, and Discus whitneyi (Frest and Johannes 1995, Jordan and Black 2012).

Pristiloma idahoense is ranked as S1 (Critically Imperiled) in Oregon (ORBIC 2019). It is a terrestrial pulmonate snail. In Oregon, this species was detected from a nearly vertical lava exposure overgrown with dry moss, ferns and scattered bushes, below a north-facing slope with Douglas fir (*P. menziesii*) and only a few feet from a practically dry creek bed by Baker in 1932. It has also been found in damp soil under a willow (*Salix*) thicket with adjacent shallow ponded water with little coniferous cover; other species present at the Wallowa-Whitman National Forest site include corn lily (*Veratrum californicum*), spruce (*Picea* spp.), and grand fir (*Abies grandis*) (Blevins *et al.* 2018).

Activities that compact soils or snow, disturb ground vegetation and/or litter, remove woody debris, alter temperature and/or humidity of the microsite, reduce canopy cover, or alter the water table could be deleterious to the habitat of *Pristiloma and radiodiscus* species (Gowan and Burke 1999). These activities include livestock grazing, timber activities, recreational activities, mining activities, heavy equipment operation, water diversions and improvements, and construction operations (Gowan and Burke 1999).

Existing conditions

Recent surveys on the Wallowa-Whitman National Forest found all three of these species distributed in low numbers across the forest. A simple analysis of variation found no statistical difference in slope, aspect, elevation and canopy cover variables for these three species and they were often found together on the same survey site. As such, it seems reasonable to combine them for an effects analysis. These species were more often found on ash soil types, within multi story structure stages in the moist potential vegetation group, with canopy cover higher than >70% (pers. comm., L. Navarrete). Surveys were conducted within the 5 Points project area in 2018 and surveyors observed two *P. wacoense* and one *P. idahoense* individuals outside of the proposed project area, but within the analysis area. One *R.abietum* was documented just outside of the analysis area on the Umatilla National Forest.

EFFECTS ANALYSIS

Direct and Indirect Effects

Alternative 1 - There would be no direct or indirect impacts to these species under the no action alternative.

Alternative 2 - Proposed treatments that reduce canopy cover can result in increases in microclimate extremes, changes in forest vegetation and litter, soil compaction and population fragmentation. In addition, fuel treatments often result in reduction of coarse woody debris (Kappes 2005). No treatment in high canopy cover areas is expected to bring the stand level canopy cover below 40%, though some gap openings are proposed which would remove those acres from functioning as snail habitat.

Prescribed burning can have a negative effect on terrestrial mollusks depending on the severity and often it can take up to 25 years for re-colonization. Intense fire events can even require a century for post-fire recolonization. Alternative 2 would reduce the risk of severe fire behavior and prescribed fire is not anticipated to result in severe fire effects. Additionally, firing techniques would reduce fire behavior through use of backing and flanking fire during prescribed fires.

Cumulative effects

No cumulative impacts are expected when reasonably foreseeable actions are considered in the project area.

Determination

Given the habitat and distribution descriptions provided by Frest and Johannes (1995), this species and its habitats potentially occur within the project area. Use of heavy equipment could potentially inadvertently crush individuals occurring near water sources under tree cover. This project **May Impact Individuals or Habitat (MIIH)**, but will not likely cause a trend toward Federal listing or a loss of viability of the population or species for *Radiodiscus abietum, Pristiloma wascoense* or

Pristiloma idahoense due to the limited size of this project area and the wide extent that these species occur across the Wallowa-Whitman.

WESTERN BUMBLEBEE (*BOMBUS OCCIDENTALIS*) AND SUCKLEY CUCKOO BUMBLEBEE (*BOMBUS SUCKLEYI*)

Background

Many North American bumblebee species have undergone severe declines in recent decades (Cameron et al. 2011; Hatfield et al. 2014). Range losses have been documented for several species, including the western bumble bee (*Bombus occidentalis*), the suckley cuckoo bumblebee (*Bombus suckleyi*) and 27% of bumble bee species in the US and Canada are listed in an extinction risk category by the International Union for Conservation of Nature (IUCN) (Hatfield et al. 2014).

Bumble bees inhabit a wide variety of natural, agricultural, urban, and rural habitats, although species richness tends to peak in flower-rich meadows of forests and subalpine zones. Relatively recent changes in land usage have compromised this habitat, putting pressure on bumblebee populations. In addition to habitat loss and fragmentation, overgrazing, climate change, pesticide use, competition with honey bees, and the introduction of nonnative pathogens are all thought to contribute to the population decline of all North American bumblebees.

There are a number of threats facing bumble bees which include; the spread of pests and diseases by the commercial bumble bee industry, other pests and diseases, habitat destruction or alteration (agriculture, urban development, grazing), pesticides and invasive species. Specific to managed Forest Service lands, the invasiveness and dominance of native grasslands by exotic plants may threaten bumble bees by directly competing with the native nectar and pollen plants that they rely on. In the absence of fire, native conifers encroach upon many meadows, which removes habitat available to bumblebees. Apiaries put on National Forest land may compete with native pollinator species, putting additional stress on individuals (Hatfield et al. 2014).

Existing Conditions

Historically *B. occidentalis* and *B. suckleyi* were found from the Pacific coast to the Colorado Rocky Mountains, but have seen severe population decline west of the Sierra-Cascade Crest. In Oregon, this species has been documented on Deschutes, Fremont-Winema, Malheur, Mt. Hood, Ochoco, Rogue River-Siskiyou, Siuslaw, Umatilla, Umpqua, Willamette, and Wallow-Whitman National Forests, and BLM land in the Burns, Lakeview and Medford Districts. Given the relatively recent range contraction for these species, it is unknown what the current “Documented” status is for many of these field units, as many of the documented sites are considered historic. Surveys conducted on the La Grande district 2014-2015 found *B. occidentalis* to be low in abundance, but present at about 50% of the surveyed sites. These same surveys only located *B. suckleyi* in two locations. Surveys were conducted within the 5 Points project area and both species were encountered within the analysis area, but not the project area.

EFFECTS ANALYSIS

Direct and Indirect Effects

Alternative 1- Under this alternative, continued increase in stand density would reduce herbaceous plant cover, potentially negatively impacting quality and quantity of forage.

Alternative 2 – Thinning can increase gaps in the canopy which can improve understory plant diversity and cover, helping to increase pollinator food resources. Thinning over large areas result in increased cover of understory plants, providing larger food patches with increased connectivity. However, heavy machinery can disturb and compact the soil which can have a negative effect on ground nesting bumblebees.

Fire is also positively correlated with plant diversity and pollinator visitation, with significant differences found in floral visitation rates between burned and unburned areas (Nuland et al. 2013). However, prescribed fire can negatively directly affect immature bumblebees that are confined to the nest through direct mortality. Fire can also indirectly affect bumblebees by burning litter and coarse woody debris used as nest sites. Proper timing of prescribed fire is important to maximize benefits. Fall burning occurs during the mobile stage of the bumblebee life cycle and is likely to have the least negative impact (Nyoka 2010). Fuels treatments would reduce the risk of stand replacing fire and encourage the return of low severity fire that can enhance meadow habitat and beneficial plant species.

Cumulative effects

Past events that affected potential bumblebee habitat include grazing and fire suppression and have been incorporated into the existing conditions. There are no cumulative impacts to these bee species when foreseeable management actions are considered.

Determination

The proposed action **May Impact Individuals of Habitat (MIIH)** for the Western and the Suckley cuckoo bumblebee in the short-term, but is not expected to affect population viability due to long-term benefits in herbaceous cover post-treatment.

REFERENCES

Arnett E. B., W.K. Brown, W.P. Erickson, J.K. Fielder, B.L. Hamilton, T.H. Henry, A. Jain, G.D. Johnson, J. Kerns, R.R. Koford, C.P. Nickolson, T.J. O'Connell, M.D. Piorkowski, and R.D. Tankersley. 2008. Patterns of bat fatalities at wind energy facilities in North America. Journal of Wildlife Management 71:61-78.

Bangs, E. E., and S. H. Fritts. 1993. Reintroduction of gray wolves to Yellowstone National Park and central Idaho. Endangered Species Tech. Bull. 18:1,18-20.

Blevins, E.B., T. Burke, E. Pelton, and L. Rost. 2018. Spring 2016 Wallowa-Whitman National Forest, La Grande District Terrestrial Mollusk Surveys. Version 1.2. Final Report to the Interagency Special Status/Sensitive Species Program (ISSSSP) from the Xerces Society for Invertebrate Conservation.

Boyd, D.K. and D.H. Pletscher. 1999. Characteristics of Dispersal in a Colonizing Wolf Population in the Central Rocky Mountains. Journal of Wildlife Management. 63:1094-1108.

Bull, E.L., Carter, B.E., 1996. Tailed frogs: distribution, ecology and association with timber harvest in northeastern Oregon. United States Forest Service, Pacific Northwest Research Station, Portland, Oregon, Research Paper 497, pp. 11.

Bull, E.L. 2005. Ecology of the Columbia spotted frog in northeast Oregon. PNW-GTR-640. US Department of Agriculture, Forest Service, Pacific Northwest Research Station, Portland, Oregon. 46 pp.

Burke, Thomas. 2013. Land Snail and Slugs of the Pacific Northwest. Oregon State University Press. Corvallis, Oregon 335 pp.

Cameron S.A., J.D. Lozier, J.P. Strange, J.B. Koch, N. Cordes, L.F. Solter, and T.L. Griswold. 2011. Patterns of widespread decline in North American bumble bees. Proceedings of the National Academy of Science 108:662–667.

Csuti, B., A. J. Kimerling, T. A. O'Neil, M. M. Shaughnessy, E. P. Gaines, and M. M. P. Huso. 2001. Atlas of Oregon wildlife: distribution, habitat, and natural history. Oregon State University Press, Corvallis, OR. 492p.

Frest, T.J. and E.J. Johannes. 1995. Interior Columbia Basin mollusk species of special concern. Interior Columbia Basin Management Project. 274p.

Gowan, D. and T. E. Burke. 1999. Conservation Assessment for *Pristiloma arcticum crateris*, Crater Lake Tightcoil. Originally issued as management recommendations; reconfigured September 2004 by N. Duncan. USDA Forest Service Region 6 and USDI Bureau of Land Management, Oregon and Washington.

Hatfield, R., S. Colla, S. Jepsen, L. Richardson, R. Thorp, and S. Foltz Jordan. 2014. IUCN Assessments for North American Bombus spp. The Xerces Society for Invertebrate Conservation Portland, Oregon. 56 pp.

Hessburg, P.F., B.G. Smith, S.D. Kreiter, C.A. Miller, R.B. Salter, C.H. McNicoll, and W.J. Hann. 1999. Historical and current forest and range landcapes in the Interior Columbia River Basin and portions of the Klamath and Great Basins. USFS Pacific Northwest Research Station General Technical Report PNW-GTR-458. 357 pp.

James, David G. Nunnallee, David. 2011. Life histories of Cascadia butterflies. Oregon State University Press. Corvallis, OR. 447p.

Johnson, D.H., and T.A. O'Neil, Managing Directors. 2001. Wildlife-habitat relationships in Oregon and Washington. Oregon State University Press, Corvallis, OR. 736 pp.

Jordan, S.F. and S.H. Black. 2012. Effects of forest land management on terrestrial mollusks: A literature review. The Xerces Society for Invertebrate Conservation. Portland, Oregon 87 pp.

Kaminski, T., and J. Hansen. 1984. Wolves of central Idaho. Unpublished report. Montana Cooperative Wildlife Research Unit, Missoula, Montana.

Marshall, B, M.G. Hunter, and A.L. Contreras, eds. 2003. Birds of Oregon. Oregon State University Press, Corvallis. 752p.

Nuland, M.E., E.N. Haag, J.A.M. Bryant, Q.D. Read, R.N. Klein, M.J. Douglas, C.E. Gorman, T.D. Greenwell, M.W. Busby, J. Collins, J.T. LeRoy, G. Schuchmann, J.A. Schweitzer, J.K. Bailey. 2013. Fire promotes pollinator visitation: Implications for ameliorating declines of pollinator service. PLoS ONE 8:e79853.

Nyoka, S.E. 2010. Can restoration management improve habitat for insect pollinators in ponderosa pine forests of the American southwest? Ecological Restoration 28:280-290.

ODFW. 2006. Oregon conservation strategy, conservation summaries for strategy species. Oregon Department of Fish and Wildlife, Salem, OR.

O'Farrell, M. J., and E. H. Studier. 1980. *Myotis thysanodes*. Mammalian Species 137:1-5.

Oregon Biodiversity Information Center. 2019. Rare, Threatened and Endangered Species of Oregon. Institute for Natural Resources, Portland State University, Portland, Oregon. 133 pp.

ORNHIC. 2009. Oregon Natural Heritage Information Center. Oregon State University, Corvallis.

Pyle, R.M. 2002. The Butterflies of Cascadia. Seattle Audubon Society, Seattle, Washington. 420p.

Thomas, J. W., ed. 1979. Wildlife habitats in managed forests: The Blue Mountains of Oregon and Washington. Agricultural Handbook No. 553. USDA Forest Service. Washington D.C. 512 pp.

USDA Forest Service. 1990. Land and Resource Management Plan, Wallowa-Whitman National Forest. USDA, Forest Service, Pacific Northwest Region (R6), Wallowa-Whitman National Forest.

USDI Fish and Wildlife Service. 2011. Federally listed, proposed, candidate species and species of concern under the jurisdiction of the Fish and Wildlife Service which may occur within Baker County, Oregon. Last updated October 8, 2011. Accessed online October 12, 2011 at http://www.fws.gov/oregonfwo/Species/Lists/

Verts, B. J., and L. N. Carraway. 1998. Land mammals of Oregon. University of California Press, Berkeley, CA. 668p.

Weller, T. J., and C. J. Zabel. 2001. Characteristics of fringed myotis day roosts in northern California. Journal of Wildlife Management 65:489-497.

Wisdom, M.J., R.S. Holthausen, B.C. Wales, C.D. Hargis, V.A. Saab, D.C. Lee, W.J. Hann, T.D. Rich, M.M. Rowland, W.J. Murphy, and M.R. Eames. 2000. Source habitats for terrestrial vertebrates of focus in the interior Columbia Basin: Broad-scale trends and management implications, Vol. 2 – Group level results. Gen. Tech. Rep. Threatened and Endangered Species, Sensitive Species and Management Indicator Species and the level of analysis required. PNW-GTR-485.

Witmer, G. W., S. K. Martin, and R. D. Sayler. 1998. Forest carnivore conservation and management in the interior Columbia Basin: Issues and environmental correlates. Gen. Tech. Rep. GTR-PNW-420. USDA Forest Service, Pacific Northwest Research Station. Portland, OR. 51p.